

Comparisons of Job Characteristics

Focus Occupation: [Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders \(51-4122\)](#)

Associated Occupation: [Machinists \(51-4041\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)
Associated Occupation: Machinists (51-4041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mechanical	6.8	18.0	12.2	<<	Extensive education and/or training may be required
Mathematics	9.2	14.2	6.6	<<	Extensive education and/or training may be required
Production and Processing	6.0	12.7	11.6	0	Current knowledge level may be sufficient
Design	5.2	11.2	5.4	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	10.2	7.6	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 70

Focus Occupation: Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)
Associated Occupation: Machinists (51-4041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Quality Control Analysis	5.9	12.6	6.0	<<	Extensive development of skills in this area may be required
Operation Monitoring	6.6	12.0	9.6	<	A higher skill level may be required
Operation and Control	5.4	11.1	8.6	<	A higher skill level may be required
Troubleshooting	4.5	10.2	5.7	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	9.3	5.0	<<	Extensive development of skills in this area may be required

Equipment Selection	3.3	8.6	4.6	<<	Extensive development of skills in this area may be required
Repairing	3.4	8.5	4.8	<<	Extensive development of skills in this area may be required
Installation	1.7	6.0	1.8	<<	Extensive development of skills in this area may be required
Technology Design	2.6	6.0	1.6	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 84			
Focus Occupation: Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122) Associated Occupation: Machinists (51-4041)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Control Precision	6.6	13.3	9.6	<<	Extensive improvement in abilities may be required
Finger Dexterity	7.6	11.6	9.6	<	Some improvement in abilities may be required
Manual Dexterity	6.5	11.1	9.7	<	Some improvement in abilities may be required
Multilimb Coordination	6.0	10.7	7.6	<<	Extensive improvement in abilities may be required
Reaction Time	4.8	10.1	7.3	<<	Extensive improvement in abilities may be required
Hearing Sensitivity	5.6	9.3	6.0	<<	Extensive improvement in abilities may be required
Rate Control	3.8	8.6	7.2	<	Some improvement in abilities may be required
Wrist-Finger Speed	3.2	7.3	4.1	<<	Extensive improvement in abilities may be required
Sound Localization	2.2	6.2	1.0	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	6.1	3.3	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 82
Focus Occupation: Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122) Associated Occupation: Machinists (51-4041)		
Work Activities		Exclusivity of Activity
Adjust production equipment/machinery setup		25

Examine products or work to verify conformance to specifications	15
Fabricate, assemble, or disassemble manufactured products by hand	11
Install equipment or attachments on machinery or related structures	48
Lay out machining, welding or precision assembly projects	63
Load or unload material or workpiece into machinery	34
Monitor production machinery/equipment operation to detect problems	27
Move or fit heavy objects	8
Operate metal or plastic fabricating equipment/machinery	54
Perform safety inspections in manufacturing or industrial setting	33
Read blueprints	10
Read specifications	23
Read technical drawings	7
Recognize characteristics of metals	62
Set up computer numerical control machines	69
Set up production equipment or machinery	51
Understand technical operating, service or repair manuals	6
Use hand or power tools	2
Use non-destructive test equipment	82
Use precision measuring tools or equipment	17
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 79

Focus Occupation: Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)
Associated Occupation: Machinists (51-4041)

Tools and Technologies	Exclusivity
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Face and head protection	7
Forming tools	2
Holding and clamping tools	3
Industry specific software	1
Information exchange software	1
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Measuring and layout tools	3
Power tools	2
Rough and finishing tools	5
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16

Viewing and observing instruments and accessories	4
Vision protection and accessories	3

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.